## Video Production Tips

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There are many elements that contribute to a good video. Much of the work is in preproduction: script, storyboard, props, location, rehearsal, editing. All of these should be refined and ready before production and not interfere with the shooting schedule. I suggest creating a shot schedule of which scenes you are going to film – if you're shooting some scenes indoors and some outdoors, arrange the script in terms of location. This will make production much more efficient. There are many books and online pages about video production for reference.

This is the most important aspect of film: SOUND. If you have a brilliant script, good actors, and direction, it will not translate if the sound is inaudible. Here are some ways to compensate for using the built-in mic on your camcorder:

## Quiet on the Set!

- 1. Shoot CUs (close-ups) of actors delivering dialogue and be aware of background noise and size of the room. A smaller room creates less ambient noise and contains the sound. If you have an external mic you can mount on the camcorder (generally a shotgun mic) that will improve the sound. If you have a lavaliere mic and few actors, you may want to use that for the best quality sound. Just cut the scenes between dialogues otherwise, don't try to shoot more than 2 people talking together. The farther you are from the actors the greater the reduction in sound quality. This is an inverse-square law effect: when you double the distance from your subject you get 1/4 the sound. So getting more people into the frame means having to back away from the scene. If you've gone all out and rented a boom mic, you can do this.
- Use headphones to monitor sound. Most camcorders have headphone jacks even if they don't have meters. It's important to always hear what you're shooting in the headphones, because we tend to disregard ambient noise in the natural environment.
- 3. No external mics no problem. Just get CUs.

## <u>Filming</u>

- 1. Make sure you have tested your equipment before shooting.
- 2. Do a few different takes from different angles. Unless you're shooting a news anchor, don't shoot head on, set the actor at an angle. Get some shots of location (called B roll) to integrate into the scenes to add some dimension. Since this is a science video, effects are encouraged. Depending on your editing program FCP, iMovie, etc. there are plenty of effects to illustrate and animate whatever concept you're presenting. If you know some animation programs, these effects can be very illuminating. Time/space dilation, dark matter, and dark

- energy all invite interpretation. Make sure you have the underlying science principles established before extrapolating with special effects.
- Watch the lighting. Set the white balance on the camcorder if you have it. Otherwise, don't shoot into the light or in front of windows. If you're shooting outdoors make sure the sun is behind you (ideally in morning or later in the afternoon when it's not directly overhead).
- 4. Use a tripod unless you're doing a *Cloverfield* sequel.
- 5. Film at eye level, unless you're going for a dramatic effect.

# **Editing**

- Add text explanations if the concept needs reiteration or clarification, but try to keep it simple. This is for other students to understand and evaluate in terms of presentation and clarity.
- 2. Background music is OK, just watch the levels. Integrating music should not compromise the audibility of the actors.
- Take your time with this process, and reshoot scenes if you aren't satisfied with the performance and able to do so. Post-production can be as time consuming as pre-production. Remember, these videos will live in perpetuity on YouTube, and we're looking for excellent scientific explanations, media innovation, and good production values.

Good Luck and may the best videos win!